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PATENT APPLICATION: US/09/834,434

DATE: 03/20/2003

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3 <110> APPLICANT: EMALFARB, MARK A.
 4 PUNT, PETER J.
 5 VAN ZEIJL, CORNELIA
 6 VAN DEN HONDEL, CORNELIUS
 8 <120> TITLE OF INVENTION: HIGH-THROUGHPUT SCREENING OF EXPRESSED DNA LIBRARIES IN
 9 FILAMENTOUS FUNGI
 11 <130> FILE REFERENCE: 3123-4006
 13 <140> CURRENT APPLICATION NUMBER: 09/834,434
 C--> 14 <141> CURRENT FILING DATE: 2003-03-13
 16 <150> PRIOR APPLICATION NUMBER: PCT/US00/10199
 17 <151> PRIOR FILING DATE: 2000-04-13
 19 <160> NUMBER OF SEQ ID NOS: 6
 21 <170> SOFTWARE: PatentIn Ver. 2.1
 23 <210> SEQ ID NO: 1
 24 <211> LENGTH: 1578
 25 <212> TYPE: DNA
 26 <213> ORGANISM: Aspergillus niger
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68           20           25           30
70 Gly Gln Tyr Ile Leu Gly Asp Thr Val Gly Asp Lys Ile Arg Ile Ile
71           35           40           45
73 Ala His Tyr Ser Gln Ser Ile Leu Val His Thr Ala Phe Gly Cys Gly
74           50           55           60
76 Val Leu Thr Ser Ser Thr Arg Met Ser Pro Thr Phe Leu Ser Gln Ser
77   65           70           75           80
79 Ile Ile Ala Ser Lys Phe Pro Arg Asn Phe Pro Leu Gln Pro Arg Val
80           85           90           95
82 Tyr Thr Thr Pro Ser Thr Pro Thr Gln Ser Gln Trp Leu Ser Leu Pro
83           100          105          110
85 Thr Arg Pro Pro Ser Trp Ser Leu Ser Ser Ala Asn Val Leu Thr Phe
86           115          120          125
88 Gly Thr Phe Thr Leu Lys Ser Gly Arg Arg Ala Ser Pro Leu Gln His
89           130          135          140
91 Arg His Tyr Arg Asn Arg Lys Thr Tyr His Cys Ile Gln Thr Pro Pro
92 145           150           155           160
94 Thr Ser Ser Thr Pro Ala Ser Ser Thr Pro Pro Leu Ser Ser Pro Pro
95           165           170           175
97 Ser Pro Pro Trp Pro Thr Pro Ser Ser Pro Ser Ser Leu Arg Thr Leu
98           180          185          190
100 Pro Ser Pro Ser Pro Thr Ser Cys Phe Gly Lys Thr Pro Ser Phe Pro
101           195          200          205
103 Asn Thr Pro Leu Pro Leu Asn Asn Pro Ile Thr Asn Lys Asn Pro Leu
104           210          215          220
106 Asn Ser Pro Ala Tyr Lys Gly Ile Pro Leu Ala Cys Ala Thr Leu Leu
107 225           230           235           240
109 Glu Leu Asn Arg Ile Asp Pro Ala Thr Trp Gly Ser Val Ser Tyr Ser
110           245           250           255
112 Tyr Asn Arg Lys Glu Ala Lys Asp His Gly Glu Gly Gly Asn Ile Val
113           260           265           270
115 Gly Ala Ala Leu Lys Gly Lys Thr Val Leu Val Ile Asp Asp Val Ile
116           275           280           285
118 Thr Ala Gly Thr Ala Met Arg Glu Thr Leu Asn Leu Val Ala Lys Glu
119           290           295           300
121 Gly Gly Lys Val Val Gly Phe Thr Val Ala Leu Asp Arg Leu Glu Lys
122 305           310           315           320
124 Met Pro Gly Pro Lys Asp Glu Asn Gly Val Glu Asp Asp Lys Pro Arg
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127 Met Ser Ala Met Gly Gln Ile Arg Lys Glu Tyr Gly Val Pro Thr Thr
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131           355           360           365
133 Asn Glu Ala Asp Met Lys Arg Leu Glu Glu Tyr Arg Ala Lys Tyr Gln
134           370           375           380
136 Ala Ser Asp Ser Val Ser Leu Thr Asp Cys Leu Gly Gly Cys Glu Arg
137 385           390           395           400
139 Leu Gly Val Val Gly Val Gly Met Lys Ser Cys Ile His Arg Gly Leu
140           405           410           415
142 Lys Arg Cys Val Glu Thr Val Val Arg Cys Phe Met Ser Lys Ser Thr
143           420           425           430
145 Asn Asp Thr Leu Lys Lys Thr Pro Trp Phe Gln Leu Asn Pro Gly Lys
146           435           440           445
148 Met Leu Gly Thr Pro Val Pro Thr Gln Trp Ala Pro Val Ser His Ile
149           450           455           460
151 Ser Gly Arg Arg Leu Phe Gly Gly Cys Gly Leu Glu Arg His Tyr Gly
152 465           470           475           480
154 Val Leu Arg Tyr Lys Ala Gly Ala Gly Val Arg Thr Thr Thr Pro Glu
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170 Leu Ile Gly Ile Cys Ile Phe Ser Asp Gly Val Asn Phe Met Ala Asn
171 20 25 30
173 Ile Ser Ser Ala Ile Pro Ser Glu Ile Arg Glu Ser His Thr Ile Pro
174 35 40 45
176 Lys Ala Tyr Trp Tyr Ile Leu His Ser Ala Ser Ala Gly Cys Leu Pro
177 50 55 60
179 His Pro Pro Glu Ala Gln Leu Phe Cys Leu Asn Gln Leu His Pro Asn
180 65 70 75 80
182 Ser Pro Ala Thr Ser Pro Ser Asn Pro Val Ser Ile Pro Leu Pro Pro
183 85 90 95
185 His Pro His Asn His Asn Gly Ser Pro Cys Leu Gln Asp Arg Leu Pro
186 100 105 110
188 Gly Val Ser Arg Arg Pro Thr Cys Leu Ser Ala Pro Ser Pro Ser Arg
189 115 120 125
191 Val Ala Val Arg His Pro Ser Asn Thr Gly Ile Ile Ala Ile Gly Arg
192 130 135 140
194 Leu Thr Thr Val Tyr Arg Leu Pro Leu Leu Leu Gln Arg Arg His Leu
195 145 150 155 160
197 Gln His Arg Leu Ser Pro Leu Arg Pro Leu His His Gly Pro His His
198 165 170 175

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200 His His Leu Pro Arg Glu Pro Phe His Pro Gln Ala Arg Arg His Ala
201      180      185      190
203 Ser Gly Lys Lys Pro Pro Leu Ser Pro Ile Pro His Phe His Ser Thr
204      195      200      205
206 Thr His Lys Leu Thr Lys Thr Pro Thr Ala Pro His Thr Lys Ala Ser
207      210      215      220
209 Pro Ser Arg Ala Pro Pro Ser Leu Asn Ser Thr Ala Ser Thr Pro Pro
210 225      230      235      240
212 Pro Gly Ala Ala Cys Pro Thr Ala Thr Thr Ala Lys Lys Pro Arg Ile
213      245      250      255
215 Thr Ala Lys Ala Ala Thr Leu Ser Ala Pro Leu Arg Ala Arg Pro Cys
216      260      265      270
218 Leu Ser Thr Met Ser Ser Arg Pro Val Pro Pro Cys Val Arg Pro Ser
219      275      280      285
221 Thr Trp Ser Pro Arg Arg Ala Ala Arg Ser Ser Asp Ser Leu Leu Leu
222      290      295      300
224 Trp Thr Ala Trp Arg Arg Cys Pro Asp Pro Arg Thr Arg Thr Val Ser
225 305      310      315      320
227 Arg Thr Ile Ser Pro Glu Val Leu Trp Val Arg Ser Val Arg Ser Met
228      325      330      335
230 Val Cys Pro Arg Arg Val Leu Leu Leu Trp Met Ile Ser Ser Cys Arg
231      340      345      350
233 Arg Arg Ala Met Arg Pro Ile Ser Gly Trp Arg Ser Ile Gly Leu Ser
234      355      360      365
236 Ile Arg Leu Val Ile Ser Arg Phe His Pro Ile Val Trp Val Gly Val
237      370      375      380
239 Arg Gly Val Arg Leu Trp Ala Glu Lys Ala Val Tyr Ile Gly Ala Arg
240 385      390      395      400
242 Gly Ala Arg Arg Ser Asp Val Leu Cys Gln Asn Leu Glu Gln Met Thr
243      405      410      415
245 Pro Lys Arg Pro Leu Gly Phe Ser Ile Ser Pro Glu Arg Cys Ser Ala
246      420      425      430
248 Arg His Glu Ser Ser Pro Leu Ser Gly His Pro Phe Pro Thr Phe Glu
249      435      440      445
251 Val Ala Asp Ala Tyr Leu Ala Glu Ala Val Ala Trp Lys Gly Thr Met
252      450      455      460
254 Ala Cys Cys Gly Thr Arg Pro Gly Leu Ala Tyr Glu Pro Arg Arg Pro
255 465      470      475      480
257 Lys Gly Thr Leu Arg Ser Tyr Tyr Tyr Tyr Val Pro Ser Pro Pro
258      485      490      495
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268 1      5      10      15
270 Phe Asp Trp Val Leu Glu Ser Val Tyr Phe Gln Met Glu Ser Thr Phe
271      20      25      30

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273 Glu Trp Pro Ile Tyr Pro Arg Arg Tyr Arg Arg Arg Asp Lys Asn Asn
274      35      40      45
276 Arg Thr Leu Phe Pro Lys His Thr Gly Thr Tyr Cys Ile Arg Leu Val
277      50      55      60
279 Arg Gly Ala Tyr Leu Ile His Pro Asn Glu Pro Asn Phe Phe Val Ser
280 65      70      75      80
282 Ile Asn Asn Cys Ile Gln Ile Pro Pro Gln Leu Pro Pro Pro Thr Pro
283      85      90      95
285 Cys Leu Tyr His Ser Leu His Thr His Thr Ile Thr Met Ala Leu Pro
286      100      105      110
288 Ala Tyr Lys Thr Ala Phe Leu Glu Ser Leu Val Gly Gln Arg Ala Asp
289      115      120      125
291 Phe Arg His Leu His Pro Glu Val Gly Ser Pro Cys Val Thr Pro Pro
292      130      135      140
294 Thr Pro Ala Leu Ser Gln Ser Glu Asp Leu Pro Leu Tyr Thr Asp Ser
295 145      150      155      160
297 Pro Tyr Phe Phe Asn Ala Gly Ile Phe Asn Thr Ala Ser Leu Leu Ser
298      165      170      175
300 Ala Leu Ser Thr Met Ala His Thr Ile Ile Thr Phe Leu Ala Glu Asn
301      180      185      190
303 Pro Ser Ile Pro Lys Pro Asp Val Met Leu Arg Val Lys Asn Pro Leu
304      195      200      205
306 Phe Pro Gln Tyr Pro Thr Ser Thr Gln Gln Pro Ile Asn Asn Gln Lys
307      210      215      220
309 Pro Pro Lys Gln Pro Arg Ile Gln Arg His Pro Pro Arg Val Arg His
310 225      230      235      240
312 Pro Pro Thr Gln Pro His Arg Pro Arg His Leu Gly Gln Arg Val Leu
313      245      250      255
315 Gln Leu Gln Pro Gln Arg Ser Gln Gly Ser Arg Arg Arg Arg Gln His
316      260      265      270
318 Cys Arg Arg Arg Ser Glu Gly Gln Asp Arg Ala Cys Asp Arg Arg Cys
319      275      280      285
321 His His Gly Arg Tyr Arg His Ala Asp Pro Gln Pro Gly Arg Gln Gly
322      290      295      300
324 Gly Arg Gln Gly Arg Arg Ile His Cys Cys Ser Gly Pro Leu Gly Glu
325 305      310      315      320
327 Asp Ala Arg Thr Gln Gly Arg Glu Arg Cys Arg Gly Arg Ala Gln Asn
328      325      330      335
330 Glu Cys Tyr Gly Ser Asp Pro Gly Val Trp Cys Ala His Asp Glu Tyr
331      340      345      350
333 Cys Tyr Ser Gly Phe Asp Gln Val Asp Ala Gly Glu Gly Gln Gly Arg
334      355      360      365
336 Tyr Glu Ala Val Gly Gly Val Gly Val Ser Gly Leu Val Gly Phe Ile
337      370      375      380
339 Asp Arg Leu Phe Gly Trp Val Glu Val Arg Leu Gly Cys Gly Arg Arg
340 385      390      395      400
342 Asn Glu Lys Leu Tyr Thr Gly Pro Glu Glu Val Arg Arg Asp Gly Arg
343      405      410      415
345 Glu Met Phe Tyr Val Lys Ile Leu Asn Lys His Leu Lys Lys Asp Pro

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VERIFICATION SUMMARY

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